Update and Overview of Administrative Records for the 2020 Census

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State Data Center Training Conference
Providence, Rhode Island
April 10, 2018

Administrative Records for the 2020 Census

Outline

- Overview
- Usage to reduce contacts in the Nonresponse Followup (NRFU) operation
- NRFU Contact Strategy with Administrative Records (AR) determination
- Research on State-provided data files
- Characteristics for administrative record enumeration and characteristic imputation
- Quality evaluation of use of AR in NRFU
  - Micro-level and macro-level comparisons

Overview: Using Administrative Records and Third-Party Data

Use information people have already provided to reduce expensive in-person followup

Improve the quality of the address list

- Update the address list
- Validate incoming data from federal, tribal, state and local governments

Increase effectiveness of advertising and contact strategies

- Support the micro-targeted advertising campaign
- Create the contact frame

Validate Respondent Submissions

- Validate respondent addresses for those without a Census ID and prevent fraudulent submissions

Reduce Field Workload for Followup Activities

- Reduce contacts for vacant, non-existent and occupied housing units from the nonresponse followup workload
- Best time to contact

Identifying Administrative Records Occupied Units

Can we reduce field contacts for 101 Main Street?

1. Build a roster from administrative record sources
    -   Internal Revenue Service Individual Tax Returns 1040
    -   Internal Revenue Service Informational Returns
    -   Centers for Medicare and Medicaid Services Medicare Enrollment database
    -   Indian Health Service Patient Database
    -   Census Bureau KIDLINK file

2. Check that multiple sources indicate the family lives at an address

3. Use statistical models to evaluate the roster
    -   How likely is it that we are counting all of the people rostered in the right place?
    -   How likely is it that the household composition of the rostered family matches the Census?
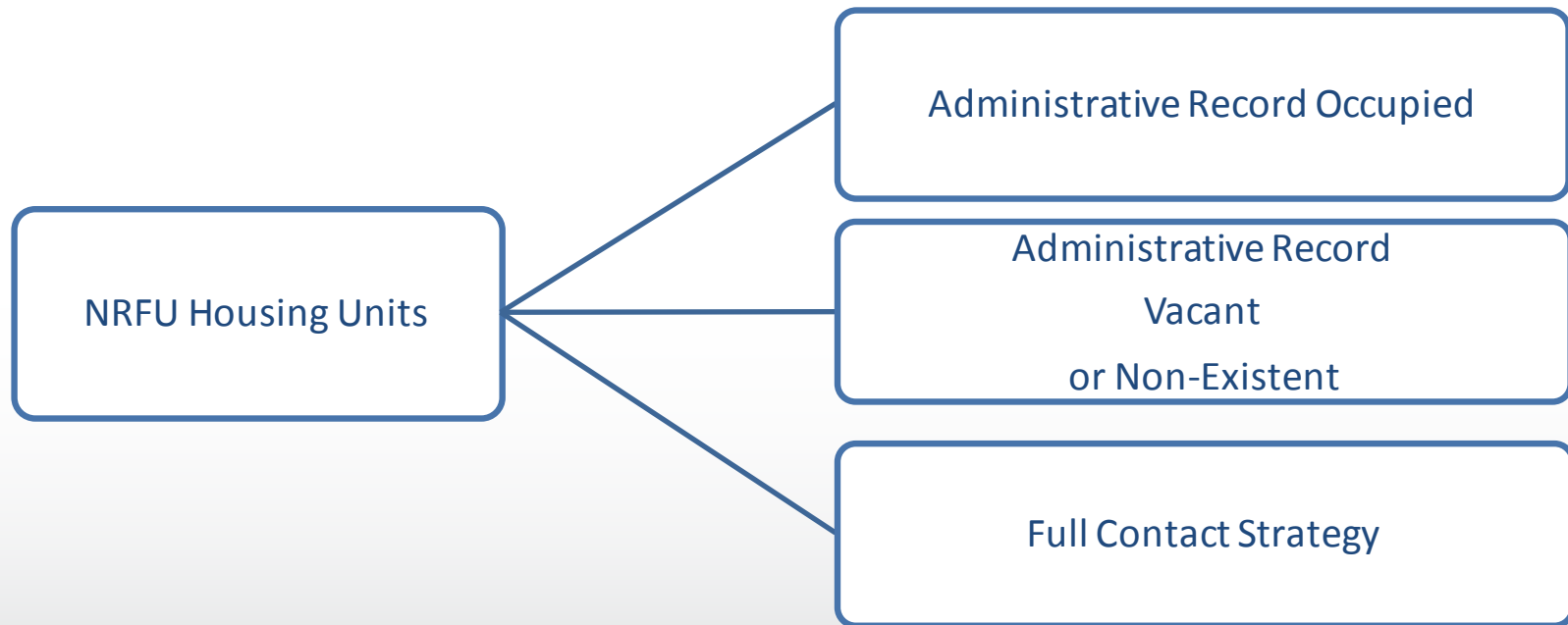
4. Decision for 101 Main Street

Identifying Administrative Records Vacant and Non-existent Addresses

Can we determine if 101 Main Street is vacant or does not meet our definition of a housing unit?

Information utilized:

- United States Postal Service Information
  - USPS Undeliverable-as-Addressed (UAA) reasons for census mailings made around April 1
  - Delivery Sequence File
- Internal Revenue Service (IRS) 1040 filings
- IRS 1099 information returns
- Centers for Medicare and Medicaid Services Medicare Enrollment database
- Indian Health Service Patient database
- Third-party Veterans Service Group of Illinois (VSGI) files
- American Community Survey 5-year block-group estimates

Contact Strategy

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                              ┌─────────────────────────────────┐
                              │  Administrative Record Occupied  │
                           ┌──┤                                  │
                           │  └─────────────────────────────────┘
┌──────────────────────┐   │  ┌─────────────────────────────────┐
│                      │   │  │      Administrative Record       │
│  NRFU Housing Units  ├───┼──┤           Vacant                 │
│                      │   │  │        or Non-Existent           │
└──────────────────────┘   │  └─────────────────────────────────┘
                           │  ┌─────────────────────────────────┐
                           └──┤       Full Contact Strategy      │
                              └─────────────────────────────────┘
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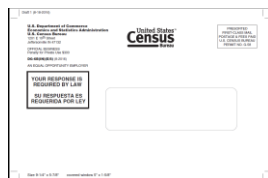
Administrative Record Occupied Contact Strategy

#1 Initial letter

#2 Reminder letter
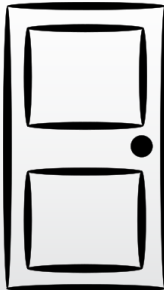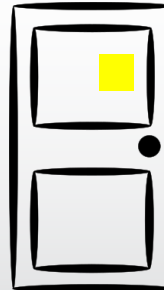
#3 Reminder postcard

#4 Questionnaire

#5 Not too late postcard

#6 One visit
by enumerator

#7 Notice of visit left by
enumerator
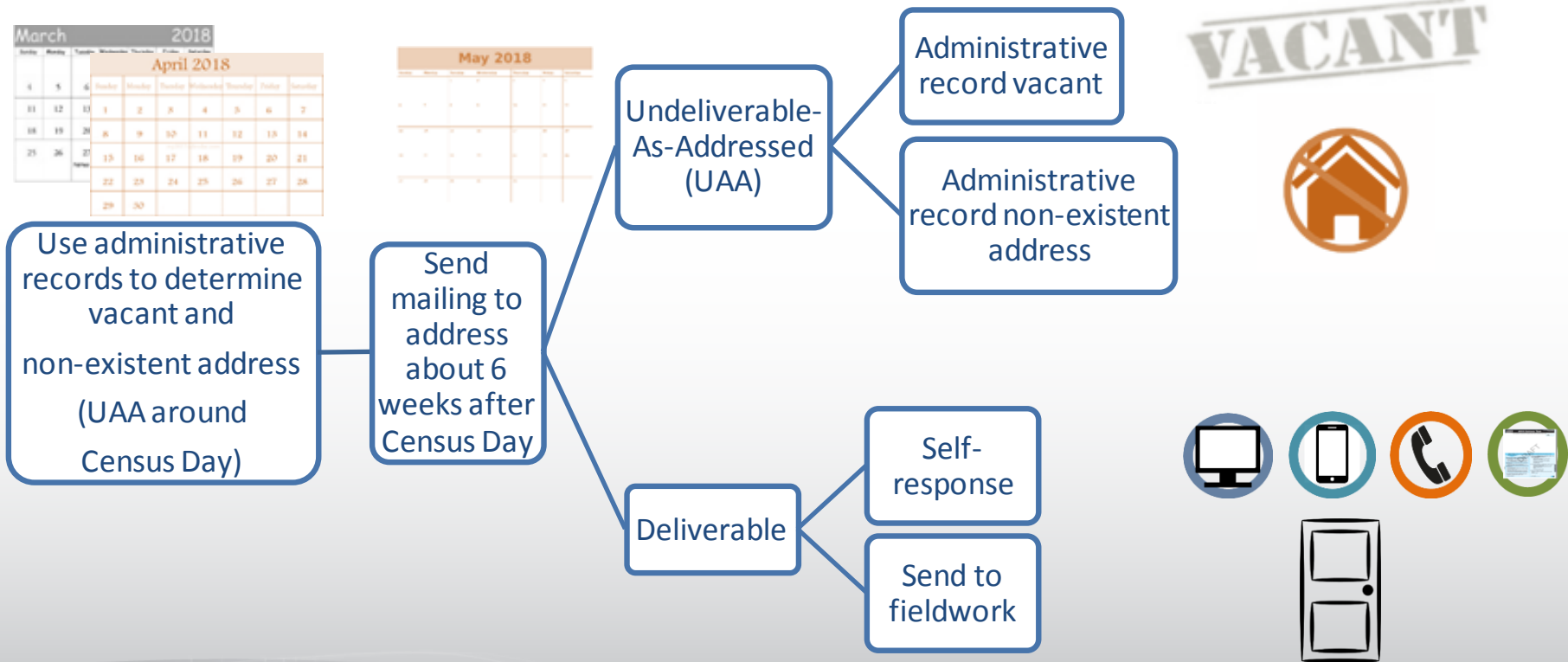
#8 Administrative record postcard
about one week after visit

- Administrative record enumeration only used if a self-response is not obtained

United States Census Bureau

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Administrative Record Vacant or Non-Existent Contact Strategy

Use administrative records to determine vacant and

non-existent address

(UAA around

Census Day) → Send mailing to address about 6 weeks after Census Day

- Undeliverable-As-Addressed (UAA)
  - Administrative record vacant
  - Administrative record non-existent address
- Deliverable
  - Self-response
  - Send to fieldwork

State Program Data

- Acquiring
  - Supplemental Nutrition Assistance Program (SNAP)
  - Woman, Infants, and Children (WIC)
  - Temporary Assistance for Needy Family (TANF)
  - Alaska Permanent Dividend Fund

- Researching Possible Implementation
  - Add to core sources
  - Use state data as a business rule to identify addresses to not reduce NRFU in-person contacts
  - Use for characteristic imputation

- Final decision of all files in September 2018

Sources of Characteristics for Administrative Record Enumeration and Characteristic Imputation

Administrative Records Source Possibilities

Age and Sex
- Prior Title 13 responses
- Census Numident

Race and Hispanic Origin
- Prior Title 13 responses
- Country of Origin (Census Numident)
- State Program data
- Census Bureau Best Race and Hispanic Origin file

Relationship to Householder
- Census Bureau KIDLINK file

Tenure
- Housing and Urban Development
- Tax and Deed Information

Quality Evaluation of Use of AR in NRFU

2010 Census research scenario

- What if we did the following for the 50 million NRFU addresses?

- Administrative record vacant: 10 percent   5.0 million
- Administrative record occupied: 15 percent   7.5 million
- Full contact strategy: 75 percent   37.5 million

- 40 percent of 7.5 million AR occupied first visits are resolved
  - 3.0 million resolved by fieldwork
  - 4.5 million use AR roster and information

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Quality Evaluation of Use of AR in NRFU

Micro-Level Examples
- Comparisons at housing unit-level
- Summaries of characteristic availability

For both micro-level and macro-level comparisons, we utilize 2010 Census Coverage Measurement and analysis of other Census Bureau surveys to assess

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Micro-Level Examples
NRFU Occupancy Status of 5 million AR Vacant Cases

- Occupied   10 percent

- Vacant   80 percent

- Not a housing unit   10 percent

Cresce (2012) documented that the gross vacancy rate from the Housing Vacancy Survey was higher than those in the Decennial Census in 1990, 2000 and 2010.

Micro-Level Examples
NRFU Occupancy Status of 7.5 million AR Occupied Cases

- Occupied   90 percent

- Vacant   8 percent

- Not a housing unit   2 percent

Micro-Level Examples
Count Agreement of 7.5 million AR Occupied Cases

- AR count higher   22 percent

- Same count   62 percent

- AR count lower   16 percent

Micro-Level Examples
Characteristic Availability of 7.5 million AR occupied

- Age   100 percent

- Sex   100 percent

- Combined 2010 Race and Hispanic   90 percent

Quality Evaluation of Use of AR in NRFU

Macro-Level Examples

- Keeping the other parts of the 2010 Census fixed,

  - what are the aggregate household population counts due to reducing contacts for AR vacant and AR occupied?

  - How do they compare to 2010 Census?

For both micro-level and macro-level comparisons, we utilize 2010 Census Coverage Measurement and analysis of other Census Bureau surveys to assess

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Macro-Level Examples
Household Population Count

	Household Population Count	Net Coverage
2010 Census	300,758,000	0.01% Overcount (0.14%)
Research Scenario	300,294,000	0.14% Undercount (0.14%)
Difference	464,000	

Household population count does not include group quarters population

0.14% standard error is from the 2010 CCM

Macro-Level Examples
Household Population Age Distribution

	HH Population	0 to 4	5 to 9	10 to 17	18 to 29	30 to 49	50+
Scenario	300,294,000	6.7%	6.8%	11.2%	15.9%	27.3%	32.2%
2010 Census	300,758,000	6.7%	6.8%	11.1%	15.9%	27.3%	32.2%

Due to rounding, percentages may not sum to 100 percent.

Macro-Level Examples
Household Population Combined Race and Hispanic Origin Distribution

	Household Population	Non-Hispanic							Hispanic
		White Alone	Black Alone	AIAN Alone	Asian Alone	NHPI Alone	SOR Alone	2+ Races	
Scenario	300,294,000	63.8%	11.9%	0.7%	4.7%	0.2%	0.2%	1.9%	16.5%
2010 Census	300,758,000	63.8%	11.9%	0.7%	4.7%	0.2%	0.2%	1.9%	16.5%

Due to rounding, percentages may not sum to 100 percent

AIAN = American Indian or Alaskan Native

NHPI = Native Hawaiian or Pacific Islander

SOR = Some Other Race

Summary

2020 Census using administrative records and third-party data in several ways:

- Reducing fields costs while maintaining data quality
- Identification of vacant and nonexistent addresses requires USPS postal carrier determinations around census day and 6 weeks later
- Administrative record enumeration only done if quality of the data is very good
- Administrative record enumeration for occupied cases only occurs if a self-response is not received for an address
- Contact strategy uses multiple modes to encourage addresses to self-respond
- Assigning characteristics for administrative record enumeration and for missing responses in characteristic imputation processing

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Thank you!

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